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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,886

04/28/2006

Bahaa Botros Seedhom

7881.24

2243

21999 7590 10/29/2007

KIRTON AND MCCONKIE  
60 EAST SOUTH TEMPLE,  
SUITE 1800  
SALT LAKE CITY, UT 84111

EXAMINER

STEWART, JASON-DENNIS NEILKEN

ART UNIT

PAPER NUMBER

4138

MAIL DATE

DELIVERY MODE

10/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/577,886

Applicant(s)

SEEDHOM ET AL.

Examiner

Jason-Dennis Stewart

Art Unit

4138

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 22 November 2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 9 recites the limitation "looped ends" in line 3. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 9,10, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Schwartz et al. 6,468,314.
5. Re Claim 1, Schwartz teaches a pad 16 of bio-compatible material, elongate connecting portions 14 connected to the periphery of the pad and connecting portions 28 extending away from the general plane of the pad, also a retaining element 20 slideable depth wise of the groove.
6. Re Claim 2, Schwartz teaches a pad seeded with cartilage forming cells (col. 4, ll. 34-36).

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7. Re Claim 3, Schwartz teaches flexible elements 14 taken through the pad and can extend generally perpendicular to the pad (fig. 2). Schwartz also teaches spaces to allow for tissue in-growth (fig. 3).
8. Re Claim 9, Schwartz teaches a retaining element 20 that comprises a ring (fig. 1).
9. Re Claim 10, Schwartz teaches a pad 16 that is hexagonally shaped (col. 9, ll. 18-19).
10. Re Claim 21, Schwartz teaches a system for regenerating damaged or destroyed articular cartilage (abstract).
11. Claims 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Seedhom et al. 2003/0135209.
12. Re Claim 18, Seedhom teaches a method of repair or damaged tissue comprising forming a narrow groove into the bone, replacing damaged tissue with a bio-compatible material and anchoring the material by a retaining means (abstract).
13. Re Claim 19, Seedhom teaches a reaming device (paragraph 27).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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15. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al. 6,468,314 i.v., Goulet et al. 2007/0005138.

16. *Re* Claim 4, Schwartz teaches the invention as claimed and as discussed above. However, Schwartz does not teach the following claimed limitation: a single filament extending in loops.

Goulet teaches a filament 2 attached by loops to pad 1 (Fig. 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schwartz i.v., Goulet in order to provide an implant for connective tissue substitution as taught by Goulet (paragraph 13).

17. *Re* Claim 5, Schwartz teaches the invention as claimed and as discussed above. However, Schwartz does not teach the following claimed limitation: the retaining element pre-attached to the ends of the loops.

Goulet teaches a bone block retaining element 1 attached to the loops of a filament 1 (paragraph 79).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schwartz i.v., Goulet in order to provide an implant for connective tissue substitution as taught by Goulet (paragraph 13).

18. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al. 6,468,314 i.v., Goulet et al. 2007/0005138 further i.v., Seedhom et al. 2003/0135209. Schwartz i.v., Goulet teaches the invention as claimed and as discussed above. However, Schwartz i.v., Goulet does not teach the following claimed limitation: and introducer tool being forced into the groove.

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Seedhom teaches an introducer tool 37 capable of producing downward force into groove (paragraph 105).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schwartz i.v., Goulet further i.v., Seedhom in order to repair damaged tissue present at or on the surface of bone in an animal as taught by Seedhom (abstract).

19. Claims 7,8,11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al. i.v., Seedhom et al. 2003/0135205.

20. Re Claim 7, Schwartz teaches the invention as claimed and as discussed above. However, Schwartz does not teach the following claimed limitation: a retaining element having a preformed shape having the shape of the groove.

Seedhom teaches retaining element 39 formed to fit groove 25 (fig. 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schwartz i.v., Seedhom in order to repair damaged tissue present at or on the surface of bone in an animal as taught by Seedhom (abstract).

21. Re Claim 8, Schwartz teaches the invention as claimed and as discussed above. However, Schwartz does not teach the following claimed limitation: a deformable retaining element.

Seedhom teaches a deformable retaining element (paragraph 106).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schwartz i.v., Seedhom in order to repair damaged tissue present at or on the surface of bone in an animal as taught by Seedhom (abstract).

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22. *Re Claim 11*, Schwartz teaches the invention as claimed and as discussed above. However, Schwartz does not teach the following claimed limitation: a pre-assembled implant delivery device.

Seedhom teaches a pre-assembled implant delivery device ready for use by a surgeon (paragraph 106).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schwartz i.v., Seedhom in order to repair damaged tissue present at or on the surface of bone in an animal as taught by Seedhom (abstract).

23. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al. i.v., Seedhom et al. 2003/0135205 further i.v., Schmieding 7,264,634.

24. *Re Claim 12*, Schwartz i.v., Seedhom teaches the invention as claimed and as discussed above. However, Schwartz i.v., Seedhom does not teach the following claimed limitation: a hollow delivery device to introduce pad and retaining element into groove.

Schmieding teaches a hollow delivery device 24 (fig. 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schwartz i.v., Seedhom further i.v., Schmieding in order to repair damaged articular joint surfaces as taught by Schmieding (abstract).

25. *Re Claim 13*, Schwartz i.v., Seedhom teaches connecting portions on the outer surface of delivery device (Seedhom, fig. 13).

26. *Re Claim 14*, Schwartz i.v., Seedhom teaches connecting portions retained by a releasable holding arrangement (Seedhom, paragraph 106).

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27. Re Claim 15, Schwartz i.v., Seedhom teaches a tubular band (Seedhom, paragraph 106).

28. Re Claim 16, Schwartz i.v., Seedhom teaches the invention as claimed and as discussed above. However, Schwartz i.v., Seedhom does not teach the following claimed limitation: a removable tool handle.

Schmieding teaches a removable tool handle (paragraph 33).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schwartz i.v., Seedhom further i.v., Schmieding in order to repair damaged articular joint surfaces as taught by Schmieding (abstract).

29. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al. i.v., Seedhom et al. 2003/0135205 i.v., Schmieding 7,264,634 further i.v., Johanson et al. 2002/0042624. Schwartz i.v., Seedhom i.v., Schmieding teaches the invention as claimed and as discussed above. However, Schwartz i.v., Seedhom i.v., Schmieding does not teach following claimed limitation: a bearing coupling handle and delivery device.

Johanson teaches a bearing between the tool handle and delivery device (paragraph 54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schwartz i.v., Seedhom i.v., Schmieding further i.v., Johnson in order to transplant a bone plug from a donor site to a recipient site as taught by Johanson (abstract).



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30. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seedhom et al. 2003/0135209. Seedhom teaches that the depth of a groove should be a multiple of the thickness of the tissue which is replaced. However, Seedhom does positively recite the range of "at least five times that of the thickness of tissue". However, it has been held that "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, see MPEP 2144.05, section II, part A.

### **Conclusion**

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, as per the Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason-Dennis Stewart whose telephone number is (571)270-3080. The examiner can normally be reached on M-F (alt Fridays off) 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571)272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS

*[Handwritten signature]*  
10/24/07

*Kim Smith*  
KIMBERLY S. SMITH  
PRIMARY EXAMINER

10/27/07